

Anti-IL15 Antibody Picoband®

Catalog Number: PB9244

About IL15

Interleukin (IL)-15 is a cytokine with the ability to stimulate the proliferation activity of Th1 and/or Th2 lymphocytes. This gene is mapped to human chromosome 4q31 by fluorescence in situ hybridization. IL-15 is a novel cytokine whose effects on T-cell activation and proliferation are similar to those of interleukin-2 (IL-2), presumably because IL-15 utilizes the beta and gamma chains of the IL-2 receptor. IL-15 can play a role in the initiation and outcome of acute and chronic rejection. Anti-IL-15 therapy in combination with classic immunosuppression therapy might be beneficial in the prevention of acute, and especially chronic, allograft rejection.

Overview

Product Name	Anti-IL15 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-IL15 Antibody Picoband® catalog # PB9244. Tested in ELISA, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , and 0.05 mg NaN ₃ . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P40933

Technical Details

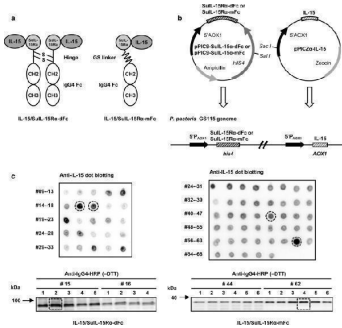
Immunogen	E.coli-derived human IL-15 recombinant protein (Position: N49-S162). Human IL-15 shares 70% amino acid (aa) sequence identity with both mouse and rat IL-15.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.

Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	ELISA, 0.1-0.5ug/ml, - Western blot, 0.1-0.5ug/ml, Human

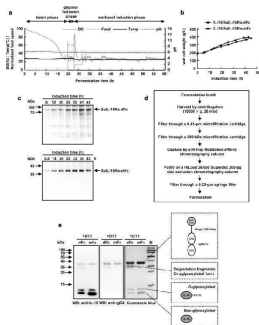
Anti-IL15 Antibody Picoband® (PB9244) Images



Anti-IL-15 antibody, PB9244, Western blotting
All lanes: Anti IL-15 (PB9244) at 0.5ug/ml
WB: Recombinant Human IL-15 Protein 0.5ng
Predicted bind size: 15KD
Observed bind size: 15KD



Construction and expression of IL-15/SuL-15Ralpha-dFc and IL-15/SuL-15Ralpha-mFc. a Schematic diagram of the two IL-15/SuL-15Ralpha-IgG4 Fc complexes. IL-15/SuL-15Ralpha-dFc was composed of two molecules of mutated IL-15 noncovalently bound to a modified dimeric SuL-15Ralpha-IgG4 Fc fusion protein, while IL-15/SuL-15Ralpha-mFc consisted of a single molecule of mutated IL-15 noncovalently bound to a modified monomeric SuL-15Ralpha-IgG4 Fc fusion protein. b The construction strategy of the two IL-15/SuL-15Ralpha-IgG4 Fc complexes. pPIC9-SuL-15Ralpha-dFc or pPIC9-SuL-15Ralpha-mFc and pPICZalpha-IL-15 were inserted into the genome of GS115 through homologous recombination using the his4 and AOX1 sequences, respectively. c Screening for the expression of IL-15/SuL-15Ralpha-dFc and IL-15/SuL-15Ralpha-mFc. Expression clones were first screened by dot blotting using rabbit anti-human IL-15 antibody followed by donkey anti-rabbit IgG-HRP conjugate, and then high expression clones were further selected and confirmed by Western blotting under nonreducing conditions using anti-human IgG4-HRP conjugate. Clones No. 15-2 and 62-4 were selected as the expression clones used in pilot-scale fermentation of IL-15/SuL-15Ralpha-dFc and IL-15/SuL-15Ralpha-mFc, respectively. The numbers in the figure represent the clone numbers Index in PubMed under a CC BY license. PMID: 34107983



Pilot-scale fermentation, purification and characterization of IL-15/SuL-15Ralpha-dFc and IL-15/SuL-15Ralpha-mFc. a Representative three-step fermentation process, including batch phase, glycerol fed-batch phase and methanol induction phase. Parameters, such as dissolved oxygen (DO), feeding speed, temperature and pH, were monitored during fermentation. b Cell growth of the two IL-15/SuL-15Ralpha-IgG4 Fc complex-expressing strains during fermentation was monitored and represented as wet cell weight. c The expression of the two IL-15/SuL-15Ralpha-IgG4 Fc complexes during fermentation was analyzed by Western blotting using an anti-human IgG4-HRP conjugate under nonreducing conditions. d The downstream processing workflow of fermentation broth. e The two purified IL-15/SuL-15Ralpha-IgG4 Fc complexes were separated by

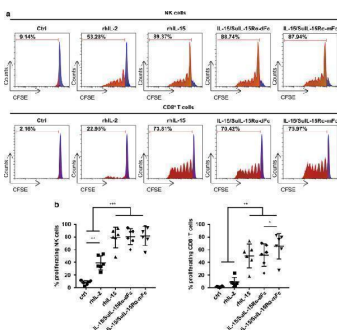
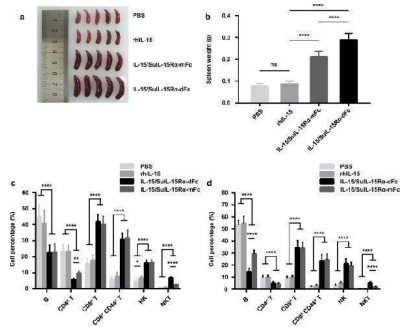
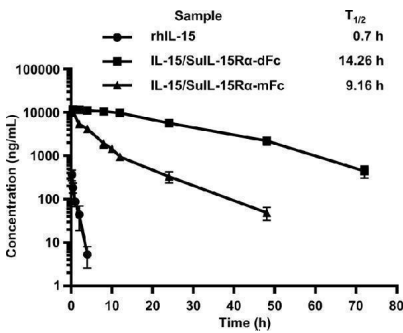
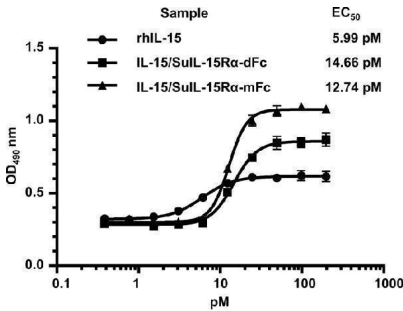
SDS-PAGE under reducing conditions and identified by Western blotting or Coomassie blue staining. The contents within the dashed boxes are the presumed protein structure of the corresponding bands. M: prestained protein marker; dFc: IL-15/SuL-15Ralpha-dFc; mFc: IL-15/SuL-15Ralpha-mFc
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In vitro bioactivity of rhIL-15, IL-15/SuL-15Ralpha-dFc and IL-15/SuL-15Ralpha-mFc. A CTLL-2 cell proliferation assay was used to evaluate the biological activity of the rhIL-15 and IL-15/SuL-15Ralpha-IgG4 Fc complexes. The EC 50 values were calculated using the four-parameter nonlinear logistic regression model. All data points are the means ± standard deviation of triplicate OD values. The results are representative of at least three experiments
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Pharmacokinetics analysis of rhIL-15, IL-15/SuL-15Ralpha-dFc and IL-15/SuL-15Ralpha-mFc. C57BL/6 J mice (male, 6–8 weeks of age, n = 4–9 for each group) were intravenously administered 0.28 mg/kg rhIL-15 or 1 mg/kg IL-15/SuL-15Ralpha-IgG4 Fc complexes, and blood samples were collected at the indicated time points after injection. The concentration of IL-15 in serum was measured by ELISA. All data points are the means ± standard deviation of the concentrations
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In vivo bioactivity of rhIL-15, IL-15/SuL-15Ralpha-dFc and IL-15/SuL-15Ralpha-mFc. C57BL/6 J mice (male, 6–8 weeks of age, n = 10–14 for each group) were intravenously injected with PBS, 0.28 mg/kg rhIL-15 or 1 mg/kg IL-15/SuL-15Ralpha-IgG4 Fc complexes. Seventy-two hours after treatment, spleens and blood samples were collected and prepared for flow cytometry. a Representative photo of spleens separated from each group (n = 5). b Spleen weight statistics. c The percentage of each indicated cell subset in splenocytes. d The percentage of each indicated cell subset in peripheral blood cells. The data shown in b, c, and d are combined from three independent experiments, and all data points are the means ± standard deviation. ns, not significant; *: p<0.05; **: p<0.01; ***: p<0.001 and ****: p<0.0001
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Effects of rhIL-2, rhIL-15, IL-15/SuL-15Ralpha-dFc, and IL-15/SuL-15Ralpha-mFc on NK and CD8 + T cell proliferation. Human PBMCs from healthy donors (n = 6) were cultured for 7 days in the absence or presence of 50 IU/mL rhIL-2, 10 ng/mL rhIL-15 or 35.7 ng/mL IL-15/SuL-15Ralpha-IgG4 Fc complexes, and the proliferation of CFSE + NK cells and CFSE + CD8 + T cells was measured by flow cytometry. a Results from one representative healthy donor. b Statistics on the proliferation of NK cells or CD8 + T cells from all healthy donors. All data points are means ± standard deviation. *:



p<0.05; **: p<0.01; ***: p<0.001 Index in PubMed under a
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Anti-IL15 Antibody

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